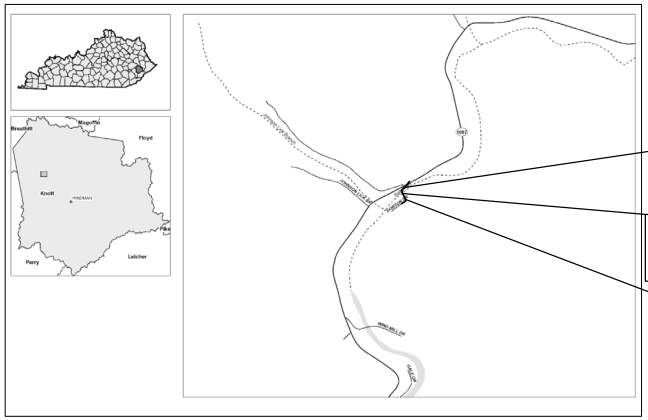
DEPT. OBJECT CODE	FEMA NO.	COUNTY OF	ITEM NO.	SHEET NO.
D23A	4663-DR	KNOTT	12-0289	R1

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
KNOTT COUNTY
DOBSON DR. (CR-1387)
OVER BALLS FORK CREEK
BRIDGE ID # 060C014

STANDARD DRAWINGS

RBI-001-12	TYPICAL GUARDRAIL INSTALLATIONS
RBI-002-07	TYPICAL GUARDRAIL INSTALLATIONS
RBR-001-13	STEEL BEAM GUARDRAIL "W" BEAM
RBR-010-16	GUARDRAIL TERMINAL SECTIONS
RBR-015-06	STEEL GUARDRAIL POSTS
RBR-050-08	GUARDRAIL END TREATMENT TYPE 7
RBR-055-01	DELINEATORS FOR GUARDRAIL
TTC-150-04	ROAD CLOSURE WITH DIVERSION
BHS-011	RAILING SYSTEM SIDE MOUNTED MGS DETAIL

ACTIVE SEPIAS



LOCATION MAP

SCALE: 1"=NTS

INDEX OF SHEETS

SPECIAL NOTES

SPECIAL PROVISIONS

SPECIFICATIONS

2019, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

9TH EDITION AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

REVISION	DATE

DESIGN CRITERIA

CLASS OF HIGHWAY: RURAL LOCAL
TYPE OF TERRAIN: MOUNTAIN
DESIGN SPEED
REQUIRED NPSD
REQUIRED PSD
LEVEL OF SERVICE
ADT PRESENT ( )
ADT FUTURE ( )
DHV
D %
T %

GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 23 MINUTES 59 SECONDS NORTH
LONGITUDE 83 DEGREES 03 MINUTES 08 SECONDS WEST

DESIGNED

% RESTRICTED SD
LEVEL OF SERVICE
MAX. DISTANCE W/O PASSING

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

RELEASE FOR CONSTRUCTION

STATE OF KENTUCKY
KEVIN F. DAMRON
16975
LICENSED PROFESSIONAL ENGINEER

ROADWAY P.E. STAMP

REV. NO.	SHEETS REVISED	DATE

EXISTING BRIDGE ID # 060C014

PREPARED BY
PALMER ENGINEERING CO.
400 SHOPPERS DR.
WINCHESTER, KY 40392
859-744-1218

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF
KNOTT

ITEM NO. 12-0289
DRAWING NO. 28616
PROJECT NUMBER: DEPT. OBJECT CODE D23A FEMA NO. 4663-DR
LETTING DATE:

RECOMMENDED BY: PROJECT MANAGER DATE:
PLAN APPROVED BY: STATE HIGHWAY ENGINEER DATE:

FILE NAME: $DGNSPEC$
USER: PEC anthonyd
DATE PLOTTED: 2/28/2023 4:21 PM
E-SHEET NAME:
Power InRoads v8.11.9.397

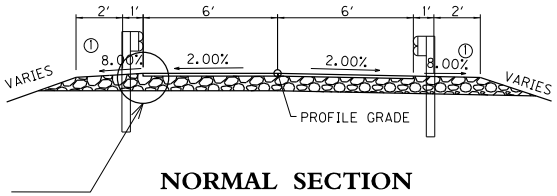
COUNTY OF	ITEM NO.	SHEET NO.
KNOTT	12-0289	R2
DEPT. OBJECT CODE	FEMA NO.	
D23A	4663-DR	

CONVENTIONAL SIGNS

SURVEY LINE
GRADE LINE
GROUND LINE
COUNTY LINE
CORPORATE LIMITS
EXIST. PROPERTY LINE
EXIST. RIGHT OF WAY & PROPERTY LINE
PROPOSED RIGHT OF WAY
RIGHT OF WAY MONUMENT
BENCH MARK
EXISTING R/W MARKER
RIGHT OF WAY MONUMENT EXISTING/PROPOSED
UTILITY TEST HOLE
EXISTING ROAD
RAILROAD
FENCE (CONTROLLED ACCESS)
FENCE (EXCEPT STONE AND HEDGE)
TREE LINE
TREES
PIPE CULVERT
CULVERT
BRIDGE
BUILDINGS
GUARDRAIL

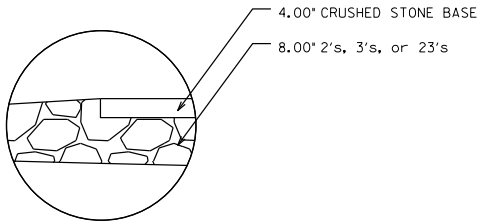
	EXISTING	PROPOSED
LIGHTING POLE		
POWER POLE		
JOINT POWER & TELEPHONE POLE		
TELEPHONE & TELEGRAPH POLE		
ANCHOR, POWER OR TELEPHONE		
STUB POWER		
STUB TELEPHONE		
WATER MAIN	WM	6" WM
GAS MAIN	GM	6" GM
TELEPHONE DUCT	T	T
ELECTRIC DUCT	E	E
DIRECT BURIAL TV CABLE	TV	TV
SANITARY SEWER (WITH MANHOLE)	SAN	SAN
STORM SEWER (WITH MANHOLE)	STORM	STORM
DIRECT BURIAL ELECTRIC CABLE	E	E
DIRECT BURIAL TELEPHONE CABLE	T	T
OVERHEAD WIRE		
TRAFFIC LIGHTS		
ELECTRIC MANHOLE	EMH	EMH
TELEPHONE MANHOLE	TMH	TMH

STONE FENCE
HEDGE FENCE
SWAMP OR MARSH
SPRINGS
SINKHOLE
QUARRY SITE
BLUE LINE STREAM
INTERMITTENT STREAM OR DITCH
LAKES OR PONDS
REGULATED FLOODWAY
NORTH POINT



SEE DETAIL "A"

NORMAL SECTION



DETAIL "A"

SEE BRIDGE LAYOUT SHEET FOR BRIDGE TYPICAL SECTION

BRIDGE SECTION

NOTES

① SEE PLAN SHEETS FOR LOCATIONS.

TRAFFIC LANE & SHOULDER PAVEMENT

CSB — 4.00"

2's, 3's, or 23's — 8.00" (4"+4")

TRAFFIC LANE & SHOULDER PAVEMENT OVERLAY

CSB — VARIABLE DEPTH

BASIS OF COORDINATES

Coordinates for horizontal control were obtained from GPS methods and adjusted to the National NAD83/FBN System.

Coordinate are based on State Plane Coordinate System Single Zone and in U.S. SURVEY FEET.

BASIS OF ELEVATIONS

Elevations were derived from GPS methods and are adjusted to the NAVD88 Vertical Datum. Geoid model used was Geoid03.

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION	OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)		
1	IP	3680461.970	5704738.529	1005.620	11+32.57	23.64' RT
2	IP	3680389.853	5704811.870	1002.075	12+20.95	14.23' LT
26	MAG	3680535.350	5704835.287	1018.614	10+29.58	9.17' LT
121	MAG	3680361.697	5704764.096	996.030	12+77.53	22.91' RT
149	MAG	3680400.462	5704829.595	1001.392	12+19.01	34.8' LT
150	MAG	3680400.542	5704786.909	1001.841	12+00.55	3.69' RT
151	MAG	3680366.437	5704603.601	1001.129	11+52.38	183.81' RT
191	MAG	3680222.164	5704517.458	991.357	11+38.88	

CENTERLINE COORD. CONTROL

POINT	DESCRIPTION	State Plane Coordinates		STATION
		NORTH (Y)	EAST (X)	
1	POB	3680564.783	5704844.929	10+00.00
2	PC 1	3680525.542	5704817.085	10+48.12
3	PI 1	3680521.299	5704814.074	10+53.32
4	PT 1	3680517.767	5704810.254	10+58.48
5	PC 2	3680478.521	5704767.815	11+16.29
6	PI 2	3680469.519	5704758.081	11+29.55
7	PT 2	3680457.553	5704763.791	11+39.14
8	PC 3	3680376.979	5704802.243	12+28.42
9	PI 3	3680362.278	5704809.258	12+44.71
10	PT 3	3680353.834	5704795.328	12+54.90
11	POE	3680332.429	5704760.018	12+96.19

NTS

TYPICAL SECTION & LEGEND & COORD. CONTROL SHEET
DOBSON DR. OVER BALLS FORK

COUNTY OF	ITEM NO.	SHEET NO.
KNOTT	12-0289	R3
DEPT. OBJECT CODE	FEMA NO.	
D23A	4663-DR	

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	DOBSON DR.			PROJECT TOTAL
1987	DELINEATOR FOR GUARDRAIL	EACH	6			6
2014	BARRICADE - TYPE III ⑤	EACH	2			2
2351	GUARDRAIL - STEEL W BEAM - S FACE	LF	100			100
2360	GUARDRAIL TERMINAL SECTION NO. 1	EACH	4			4
2562	TEMPORARY SIGNS	SF	79			79
2569	DEMOBILIZATION	LS	1			1
2650	MAINTAIN AND CONTROL TRAFFIC ②	LS	1			1
2726	STAKING	LS	1			1
2731	REMOVE STRUCTURE ④	LS	1			1
5952	TEMPORARY MULCH	SY	575			575
5953	TEMP SEEDING AND PROTECTION	SY	431			431
5963	INITIAL FERTILIZER	TON	.01			.01
5964	20-10-10 FERTILIZER	TON	.02			.02
5985	SEEDING AND PROTECTION	SY	307			307
5992	AGRICULTURAL LIMESTONE	TON	.2			.2
~~14004~~	~~W DIRECTIONAL BORE~~	~~LF~~	~~40~~			~~40~~
~~14056~~	~~W PIPE (PVC 02 INCH)~~	~~LF~~	~~140~~			~~140~~
~~14091~~	~~W TIE-IN (02 INCH)~~	~~EACH~~	~~2~~			~~2~~
~~14114~~	~~W VALVE CUT-IN 02 INCH~~	~~EACH~~	~~2~~			~~2~~
20191ED	OBJECT MARKER TY 3 ⑤	EACH	4			4

PAVING SUMMARY

ITEM CODE	ITEM	TONS	ENTRANCE			PROJECT TOTAL
3	CRUSHED STONE BASE ①	22	16			38
80	CRUSHED AGGREGATE NO. 23 ①	35				35

PAVING AREAS

ITEM	DOBSON DR.		ENTRANCE				PROJECT TOTAL	
	S	Q	U	A	R	E	Y	A	R	D	S
4.00" CRUSHED STONE BASE	96									96	
8.00" CRUSHED AGGREGATE NO. 23 ③	43									43	
FULL DEPTH CRUSHED AGGREGATE NO. 23 ③	22									22	
6.00" CRUSHED STONE BASE			46							46	

NOTES

① ESTIMATED AT 115 LBS. PER SQ. YD. PER INCH OF DEPTH.

② THE COST TO CONSTRUCT, MAINTAIN, AND REMOVE THE TEMPORARY DIVERSION SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "MAINTAIN AND CONTROL TRAFFIC".

③ CONTRACTOR MAY USE CRUSHED AGGREGATE NO. 2's, NO. 3's, OR NO. 23's.

④ REMOVAL OF THE STRUCTURE INCLUDES THE REMOVAL OF THE CONCRETE SLAB, CONCRETE CURB, STEEL, SUPERSTRUCTURE AND ANY FRAMEWORK IN PLACE. REMOVAL OF THE BRIDGE SHALL INCLUDE THE TRANSPORTATION AND DISPOSAL OF ALL DEMOLISHED MATERIAL. UNLESS OTHER WISE DIRECTED BY THE ENGINEER, ALL MATERIAL REMOVED FROM THE STRUCTURE SHALL BE THE PROPERTY OF THE CONTRACTOR.

⑤ FOR TEMPORARY CROSSING.

NOTE:

WATERLINE RELOCATION WILL BE COMPLETED BY OTHERS. REFER TO THE UTILITY IMPACT NOTE FOR MORE INFORMATION. THE CONTRACTOR SHALL VERIFY ACTUAL UTILITY RELOCATION PRIOR TO EXCAVATION.

GENERAL & PAVING SUMMARY SHEET

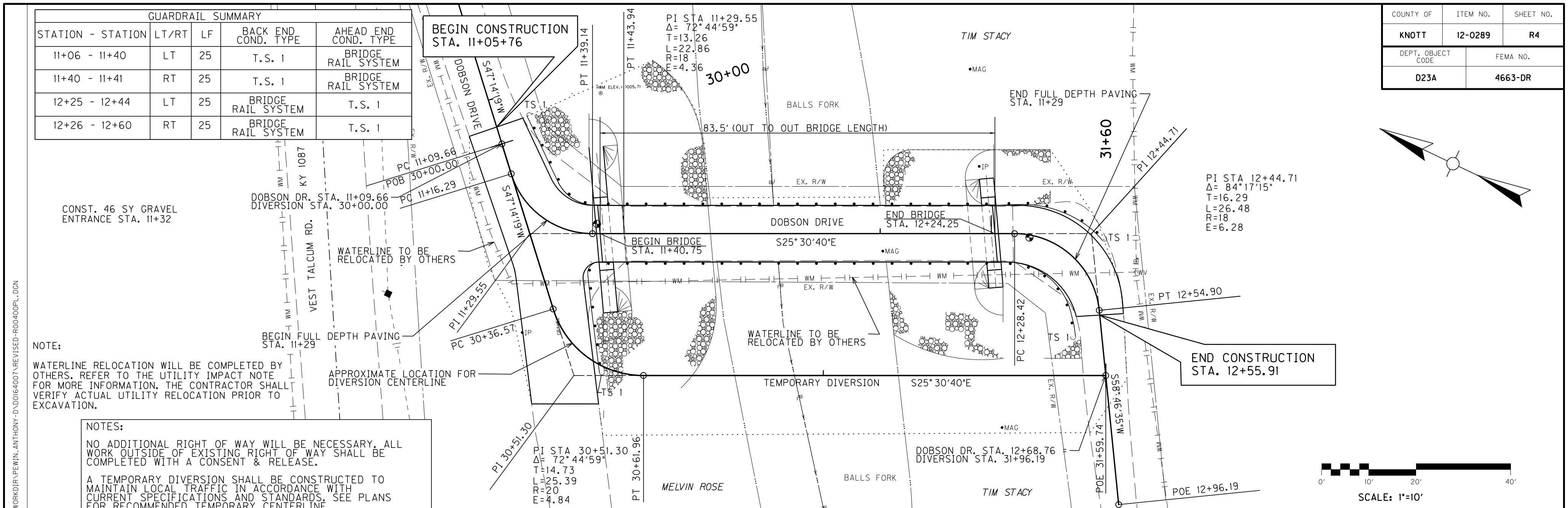
DOBSON DR. OVER BALLS FORK

COUNTY OF	ITEM NO.	SHEET NO.
KNOTT	12-0289	R4

DEPT. OBJECT CODE	FEMA NO.
D23A	4663-DR

GUARDRAIL SUMMARY

STATION - STATION	LT/RT	LF	BACK END COND. TYPE	AHEAD END COND. TYPE
11+06 - 11+40	LT	25	T.S. 1	BRIDGE RAIL SYSTEM
11+40 - 11+41	RT	25	T.S. 1	BRIDGE RAIL SYSTEM
12+25 - 12+44	LT	25	BRIDGE RAIL SYSTEM	T.S. 1
12+26 - 12+60	RT	25	BRIDGE RAIL SYSTEM	T.S. 1



NOTE:

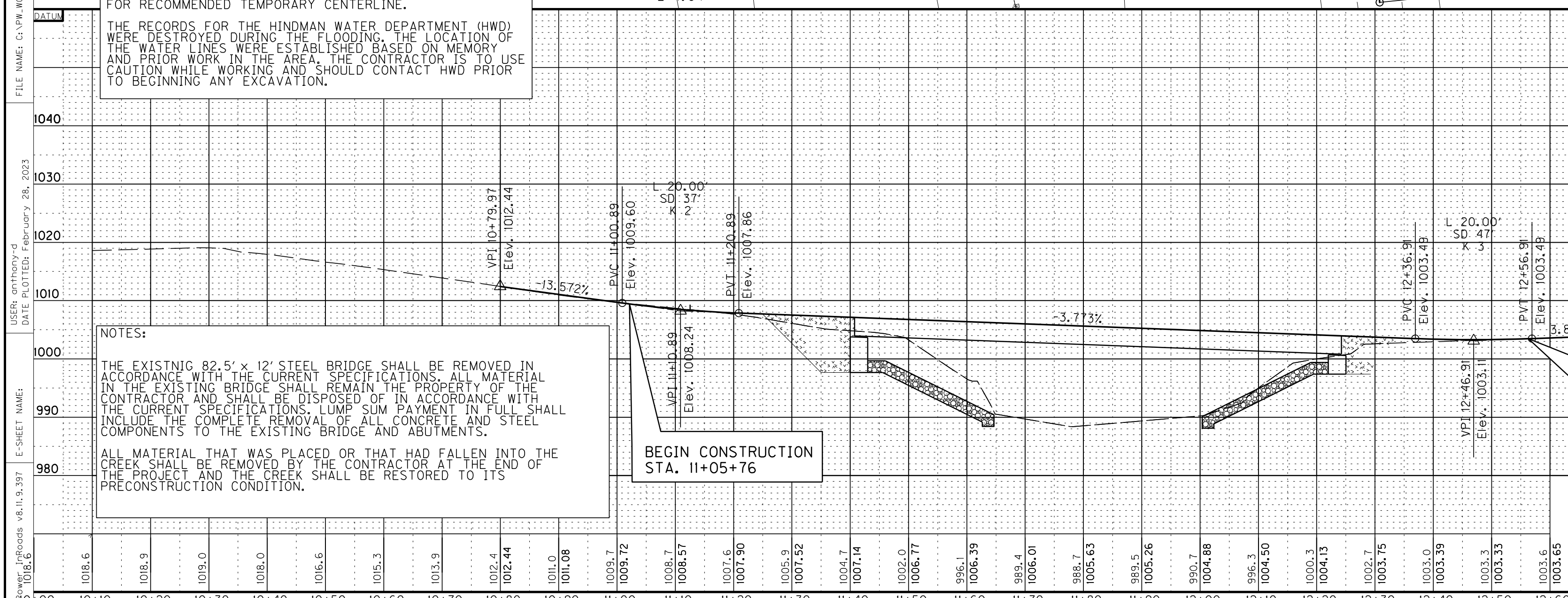
WATERLINE RELOCATION WILL BE COMPLETED BY OTHERS. REFER TO THE UTILITY IMPACT NOTE FOR MORE INFORMATION. THE CONTRACTOR SHALL VERIFY ACTUAL UTILITY RELOCATION PRIOR TO EXCAVATION.

NOTES:

NO ADDITIONAL RIGHT OF WAY WILL BE NECESSARY. ALL WORK OUTSIDE OF EXISTING RIGHT OF WAY SHALL BE COMPLETED WITH A CONSENT & RELEASE.

A TEMPORARY DIVERSION SHALL BE CONSTRUCTED TO MAINTAIN LOCAL TRAFFIC IN ACCORDANCE WITH CURRENT SPECIFICATIONS AND STANDARDS. SEE PLANS FOR RECOMMENDED TEMPORARY CENTERLINE.

THE RECORDS FOR THE HINDMAN WATER DEPARTMENT (HWD) WERE DESTROYED DURING THE FLOODING. THE LOCATION OF THE WATER LINES WERE ESTABLISHED BASED ON MEMORY AND PRIOR WORK IN THE AREA. THE CONTRACTOR IS TO USE CAUTION WHILE WORKING AND SHOULD CONTACT HWD PRIOR TO BEGINNING ANY EXCAVATION.



NOTES:

THE EXISTNIG 82.5' x 12' STEEL BRIDGE SHALL BE REMOVED IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS. ALL MATERIAL IN THE EXISTING BRIDGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS. LUMP SUM PAYMENT IN FULL SHALL INCLUDE THE COMPLETE REMOVAL OF ALL CONCRETE AND STEEL COMPONENTS TO THE EXISTING BRIDGE AND ABUTMENTS.

ALL MATERIAL THAT WAS PLACED OR THAT HAD FALLEN INTO THE CREEK SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF THE PROJECT AND THE CREEK SHALL BE RESTORED TO ITS PRECONSTRUCTION CONDITION.

DOBSON DR.
OVER BALLS FORK
PLAN & PROFILE SHEET

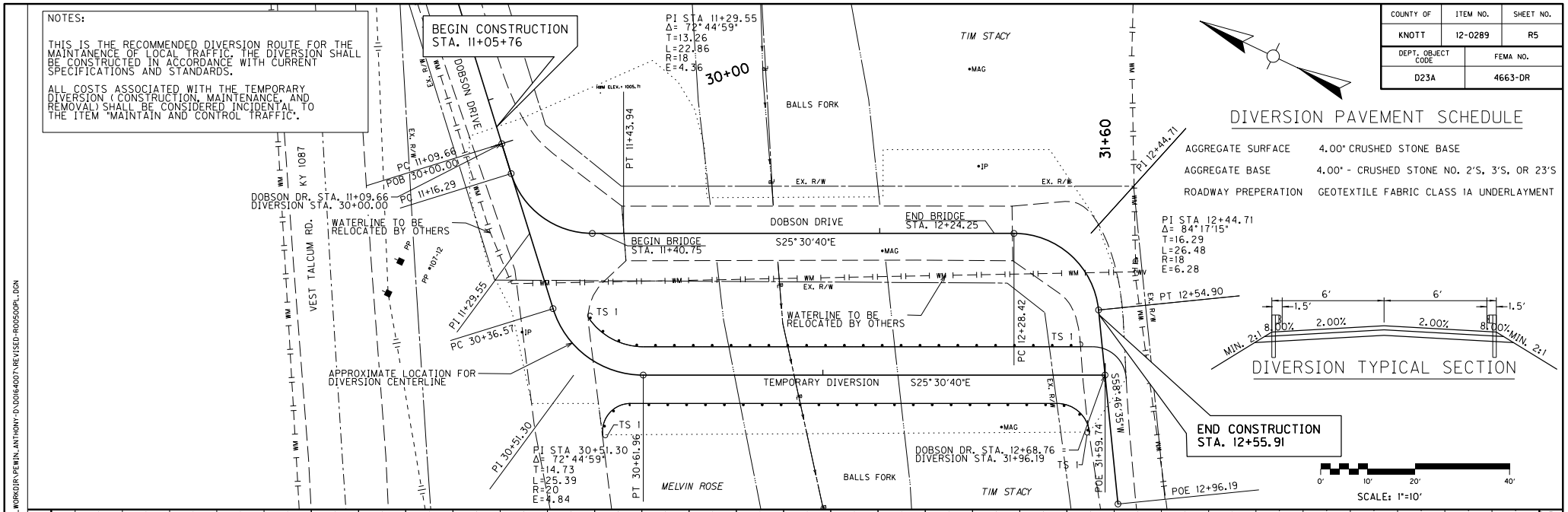
FILE NAME: C:\PW_WORKDIR\PEWIN_ANTHONY-D\D0164007\REVISED-R0040OPL.DGN
USER: anthony-d
DATE PLOTTED: February 28, 2023
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
KNOTT	12-0289	R5
DEPT. OBJECT CODE	FEMA NO.	
D23A	4663-DR	

NOTES:

THIS IS THE RECOMMENDED DIVERSION ROUTE FOR THE MAINTANENCE OF LOCAL TRAFFIC. THE DIVERSION SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT SPECIFICATIONS AND STANDARDS.

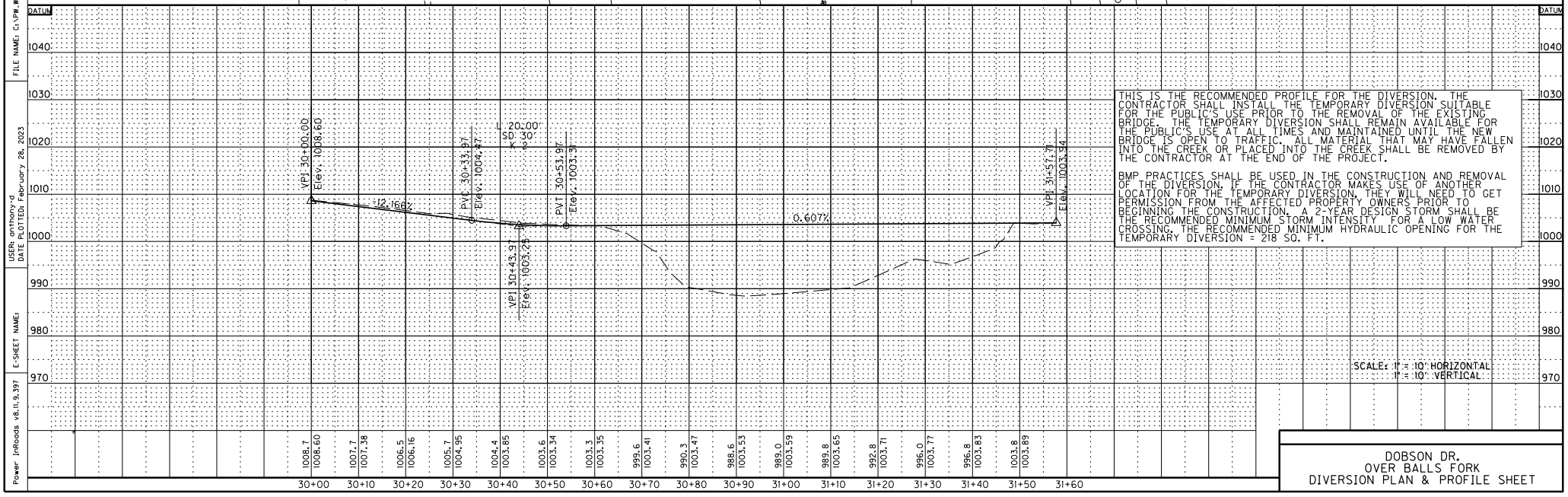
ALL COSTS ASSOCIATED WITH THE TEMPORARY DIVERSION (CONSTRUCTION, MAINTENANCE, AND REMOVAL) SHALL BE CONSIDERED INCIDENTAL TO THE ITEM "MAINTAIN AND CONTROL TRAFFIC".



DIVERSION PAVEMENT SCHEDULE

AGGREGATE SURFACE	4.00" CRUSHED STONE BASE
AGGREGATE BASE	4.00" - CRUSHED STONE NO. 2'S, 3'S, OR 23'S
ROADWAY PREPERATION	GEOTEXTILE FABRIC CLASS IA UNDERLAYMENT

DIVERSION TYPICAL SECTION



THIS IS THE RECOMMENDED PROFILE FOR THE DIVERSION. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DIVERSION SUITABLE FOR THE PUBLIC'S USE PRIOR TO THE REMOVAL OF THE EXISTING BRIDGE. THE TEMPORARY DIVERSION SHALL REMAIN AVAILABLE FOR THE PUBLIC'S USE AT ALL TIMES AND MAINTAINED UNTIL THE NEW BRIDGE IS OPEN TO TRAFFIC. ALL MATERIAL THAT MAY HAVE FALLEN INTO THE CREEK OR PLACED INTO THE CREEK SHALL BE REMOVED BY THE CONTRACTOR AT THE END OF THE PROJECT.

BMP PRACTICES SHALL BE USED IN THE CONSTRUCTION AND REMOVAL OF THE DIVERSION. IF THE CONTRACTOR MAKES USE OF ANOTHER LOCATION FOR THE TEMPORARY DIVERSION, THEY WILL NEED TO GET PERMISSION FROM THE AFFECTED PROPERTY OWNERS PRIOR TO BEGINNING THE CONSTRUCTION. A 2-YEAR DESIGN STORM SHALL BE THE RECOMMENDED MINIMUM STORM INTENSITY FOR A LOW WATER CROSSING. THE RECOMMENDED MINIMUM HYDRAULIC OPENING FOR THE TEMPORARY DIVERSION = 218 SQ. FT.

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

DOBSON DR.
OVER BALLS FORK
DIVERSION PLAN & PROFILE SHEET

FILE NAME: C:\PW_WORKDIR\PEWIN_ANTHONY-D\D0164007\REVISED-R005OOPL.DGN
USER: anthonyd
DATE PLOTTED: February 28, 2023
E-SHEET NAME:
PowerInRoads v8.11.9.397

LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

KNOTT COUNTY
CR 1387 - DOBSON DRIVE
OVER BALLS FORK
STA. 11+82.50

ESTIMATE OF QUANTITIES

	BID ITEM CODE	02231	02998	03299	08001	08019	08100	08104	08151	08665	23378EC	25017ED								Pile Driving Alternate			Pile Strike Alternate (Hydraulic Seating)		
	BID ITEM	Structure Granular Backfill	Masonry Coating	Armored Edge for Concrete	Structure Excavation, Common	Cyclopean Stone Rip Rap [A]	Concrete Class "A"	Concrete Class "AA"	Steel Reinforcement, Epoxy Coated	PPC Box Beam CB33-48	Concrete Sealing	Rail System Side Mounted MGS								Test Piles	Pre-drilling for Piles [B]	Piles - Steel HP 12 x 53	Test Piles	Pre-drilling for Piles [B]	Piles - Steel HP 12 x 53
	UNIT	C.Y.	S.Y.	L.F.	C.Y.	TONS	C.Y.	C.Y.	LBS.	L.F.	S.F.	L.F.								L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
Substructure	End Bent #1	81	30		62	220	29.0		2893											19.5	40	43.5	20	42	45
Substructure	End Bent #2	28	14		27	174	12.2		1376											17	30	24	18.5	34	26.5
Superstructure			123	24.1				16.3	2094	250.5	1072	155													
BRIDGE TOTALS		109	167	24.1	89	394	41.2	16.3	6363	250.5	1072	155								36.5	70	67.5	38.5	76	71.5

[A] See note on Sheet S03.

[B] Quantity may be increased or decreased based on conditions in the field.

INDEX OF SHEETS

SPECIAL NOTES

Special note for Sealing Bridge Decks

Special note for Pile Strike Alternate

SPECIAL PROVISIONS

69 Embankment at Bridge End Bent Structures

STANDARD DRAWINGS

BBP-003-02	Elastomeric Bearing Pads for Box Beams
BDP-001-06	Box Beam General Notes and References
BDP-002-03	Box Beam Bearing Details
BDP-003-03	Box Beam Miscellaneous Details
BDP-004-04	Box Beam Tension Rod Details
BDP-010-04	Box Beam B33 & CB33 Details
BGX-006-10	Stencils for Structures
BGX-012-02	Geotechnical Legend
BHS-011	Railing System Side Mounted MGS Details
BJE-001-14	Armored Edges
BPS-003-09	HP12x53 Steel Pile
RBR-001-13	Steel Beam Guardrail ("W" Beam)
RBR-015-06	Steel Guardrail Posts
RGX-100-07	Treatments of Embankments at End Bents
RGX-105-09	Treatments of Embankments at End Bents

SPECIFICATIONS

2019 Standard Specifications for Road and Bridge Construction.

9th Edition AASHTO LRFD Bridge Design Specifications

STATE OF KENTUCKY
LUCAS A. BEATTIE
37671
PROFESSIONAL ENGINEER

Digitally signed by Lucas Beattie
Date: 2023.03.01 08:32:42 -05'00'

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

TITLE SHEET

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S01	28616

...\Dgn\060C014_S01_TITLE.dgn 2/13/2023 3:16:39 PM

GENERAL NOTES

SPECIFICATIONS:

All references to the Standard Specifications are to the 2019 edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, with current supplemental specifications. All references to the AASHTO Specifications are to the 9th edition of the AASHTO LRFD Bridge Design Specifications.

LIVE LOAD:

This bridge is designed for KYHL-93 which is 1.25 times the HL-93 live load.

FUTURE WEARING SURFACE:

The bridge has been designed for a future wearing surface weight of 15 psf.

MATERIAL DESIGN SPECIFICATIONS:

For Class "A" Reinforced Concrete:	f'c = 3500 PSI
For Class "AA" Reinforced Concrete:	f'c = 4000 PSI
For Steel Reinforcement:	fy = 60,000 PSI
For Structural Steel Piling:	fy = 50,000 PSI

MATERIAL SPECIFICATIONS:

AASHTO Specifications or ASTM, current edition, as designated below shall govern the materials furnished.

AASHTO M153	Premolded Cork Filler, Type II
AASHTO M-31	Deformed and Plain Billet-Steel for Concrete Reinforcement, Grade 60

PREFORMED CORK EXPANSION JOINT MATERIAL:

Preformed Cork Expansion Joint Material shall conform to subsection 807.04.02 (Type II) of the Kentucky Department of Highways Standard Specifications.

CONCRETE:

Class "AA" concrete is to be used throughout the Slab. Prestressed beam concrete shall be in accordance with the Standard Drawing BDP-001-06. All other concrete shall be Class "A" unless otherwise noted.

FOUNDATION DATA:

See Foundation Layout Sheet.

DIMENSIONS:

Dimensions are for a normal temperature of 60 degrees F. Layout dimensions are horizontal measurements. Stationing and elevations are in feet.

REINFORCEMENT:

Dimensions shown from the face of concrete to bars are to center of bars unless otherwise shown. Spacing of bars is from center to center of bars. Clear distance to face of concrete is 2 inches unless otherwise noted. Any reinforcing bars designated by suffix (e) in the Plans shall be epoxy coated in accordance with Section 811.10 of the Standard Specifications.

Any reinforcing bars designated by suffix (s) in a Bill of Reinforcement shall be considered a stirrup bar for purposes of bend diameters.

FABRIC GEOTEXTILE CLASS 2:

Fabric Geotextile Class 2 is incidental to Structure Granular Backfill.

SLOPE PROTECTION:

Slope protection shall be cyclopean stone rip rap in accordance with the plans and specifications. Geotextile fabric is incidental to this item.

BEVELED EDGES:

All exposed edges shall be beveled ¾" unless otherwise shown.

TEMPORARY RETAINING STRUCTURE EXCAVATIONS:

Temporary sheeting, shoring and/or dewatering methods may be required for the installation of the pile caps. The contractor shall be responsible for the stability and safety of all excavations.

COMPLETION OF THE STRUCTURE:

The Contractor is required to complete the structure in accordance with the plans and specifications. Material, labor or construction operations, not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include cofferdams, shoring, excavations, backfilling, removal of all or parts of existing structures, phase construction, incidental materials, labor, or anything else required to complete the structure.

CONSTRUCTION PHASING AND MAINTENANCE OF TRAFFIC:

The contractor shall arrange to do the work in accordance with the plans and maintenance of traffic notes as shown on the roadway plans during construction of this project.

MASONRY COATING:

A masonry coating finish shall be applied in accordance with Section 601.03.18b of the Standard Specifications. This masonry coating shall not be applied until the deck has been completed.

GUARDRAIL:

Side mounted MGS railing system shall be installed per Standard Drawing BHS-011.

SHOP DRAWINGS:

Submit shop drawings that are required by the plans and specifications directly to the Consultant. If changes in the design plans are proposed by a fabricator or supplier, submit those changes to the Consultant. Submit all final, approved shop drawings to the Division of Structural Design.

CONSTRUCTION IDENTIFICATION:

The names of the prime contractor and the sub-contractor shall be imprinted in the concrete with 1" letters at a location designated by the engineer. The contractor shall furnish all plans, equipment and labor necessary to do the work for which no direct payment will be made.

TEMPORARY SUPPORTS:

Temporary supports or shoring will not be permitted under the beams when pouring the concrete floor slab or when taking "top of beam" elevations.

PILING:

Piling shall be driven to refusal. See Foundation Layout on sheet S04 for additional pile details.

As an alternative to pile driving, pre-drilling may be completed and the pile placed then seated through the application of hydraulic load. Refer to the Special Note for Pile Strike Alternate for details regarding this alternate.

PILE POINTS:

Provide pile points conforming to Section 604 of the Standard Specifications and of the size shown on the Foundation Layout. If pre-drilling for piles is required for pile installation, pile points are not required.

CONCRETE SEALING:

Apply Concrete Sealer in accordance with the Special Note for Sealing Bridge Decks.

SPECIFICATIONS CONTRARY TO THE STANDARD DRAWINGS:

Where the plans and specifications differ from the standard drawings, the plans and specifications shall control.

MASTIC TAPE:

Mastic Tape used to seal joints shall meet the requirements of ASTM C-877 Type I, II, or III. The joint shall be covered with 12" wide mastic tape. Prior to application the joint surface shall be clean and free of dirt, debris, or deleterious material. Primer, if required by the tape manufacturer, shall be applied for a minimum width of 9" on each side of the joint.

Mastic Tape shall be either:

EZ-Wrap Rubber by Press-Seal Corporation
Seal Wrap by Mar Mac Manufacturing Co. Inc.
Cadilloc by the UP Rubber Co. Inc.
or approved equal

Mastic Tape shall cover the joint continuously unless otherwise shown in the plans. Mastic Tape shall be spliced by lapping tape a minimum of 6" and in accordance with the manufacturer's recommendations with the overlap running downhill.

The cost of labor, materials, and incidental items for furnishing, and installing Mastic Tape shall be considered incidental to the unit bid price for Concrete Class "AA" and no separate measurement of payment shall be made.

UTILITIES:

The Contractor shall be responsible for locating any and all existing utilities prior to excavation of material or installation of guardrail or other construction activities that may involve utilities overhead or underground.

TEMPORARY DIVERSION:
Contractor shall install a temporary diversion suitable for the public's use prior to the removal of the existing bridge. The temporary diversion shall remain available for the public's use at all times and maintained until the new bridge is open to traffic. All material that may have fallen into the creek or placed into the creek shall be removed by the Contractor at the end of the project. BMP practices shall be used in the construction and removal of the diversion.

For hydraulic opening and additional diversion details see Roadway Plans.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY
Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE
DETAILED BY:	J.A. ROSE	L.A. BEATTIE

GENERAL NOTES

CROSSING
BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S02	28616

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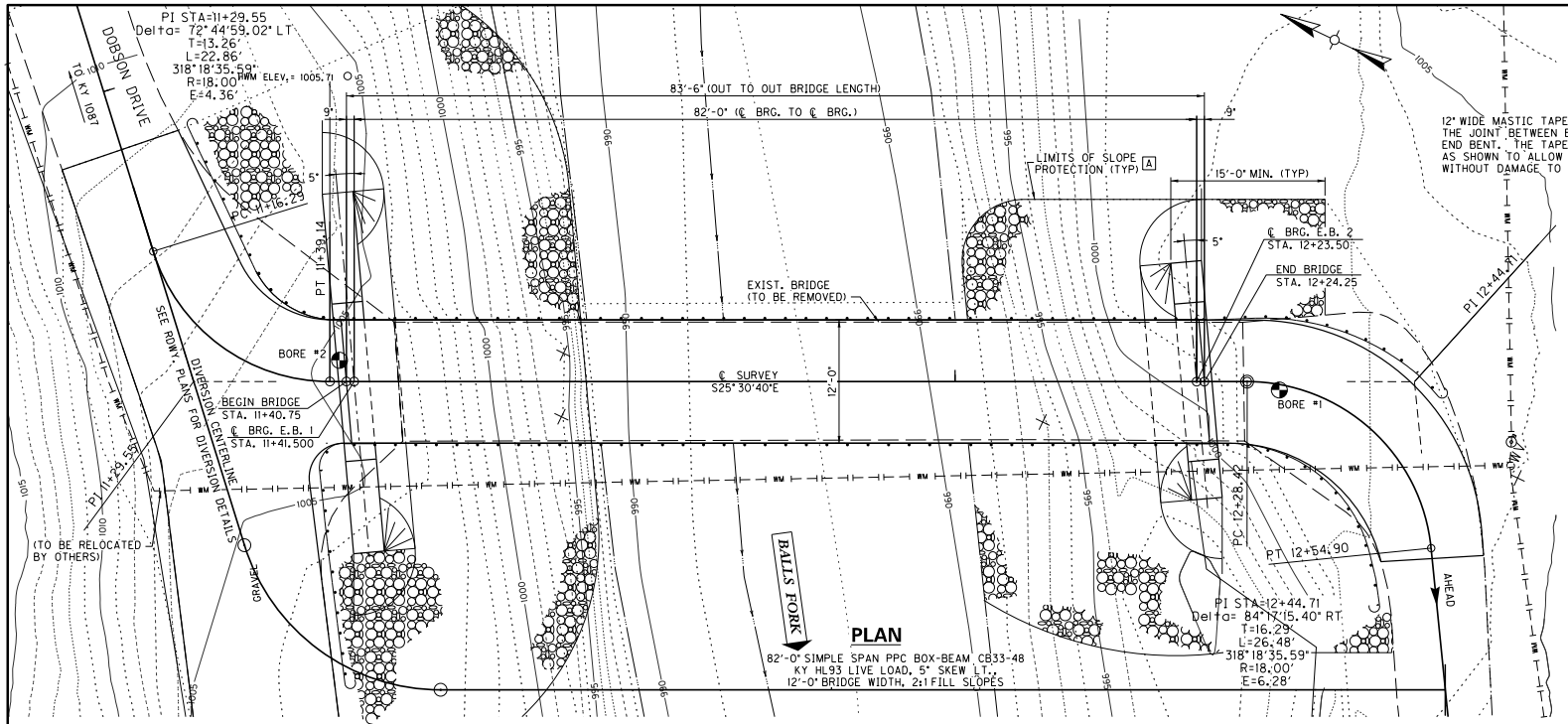
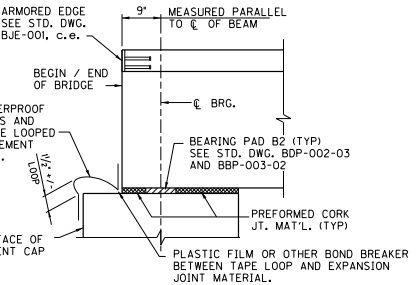


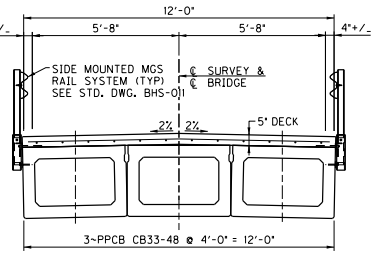
PLAN

82'-0" SIMPLE SPAN PPC BOX-BEAM CB33-48
KY HL93 LIVE LOAD, 5° SKEW LT.,
12'-0" BRIDGE WIDTH, 2:1 FILL SLOPES

NOTE: BRIDGE GUARDRAIL IS TO BE CONNECTED TO APPROACH GUARDRAIL TO FORM A CONTINUOUS UNIT. FOR DETAILS SEE RAILING SYSTEM SIDE MOUNTED MGS DETAILS AND ROADWAY DETAILS.



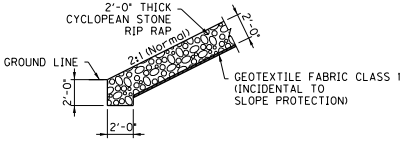
JOINT WATERPROOFING DETAIL



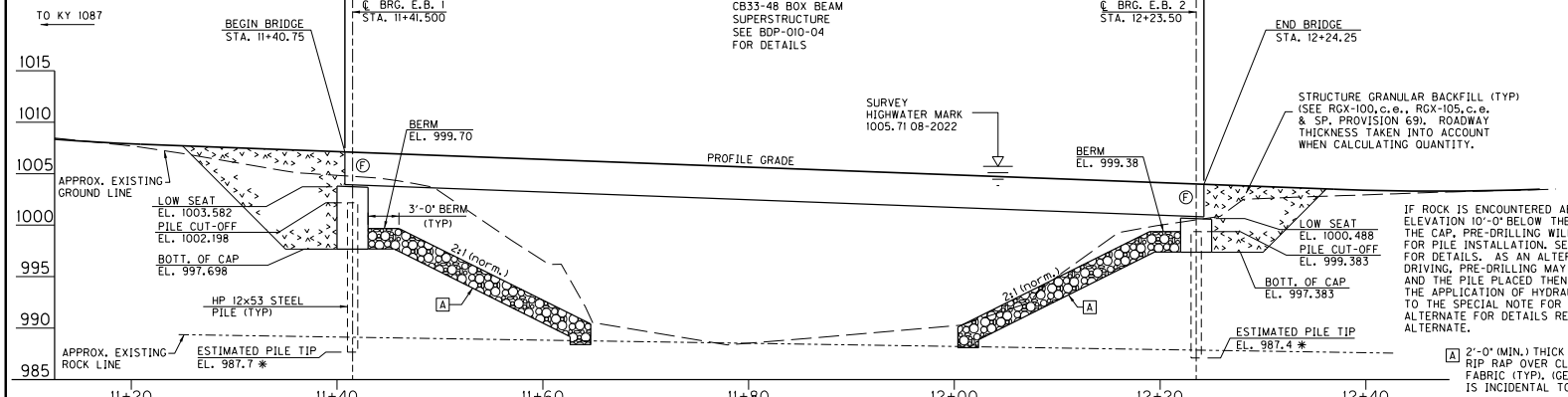
TYPICAL SECTION

(LOOKING AHEAD)

BEAM LENGTH = 83'-6"
USE DETAILS FOR 84'-0" CB33-48



TOE OF SLOPE DETAIL



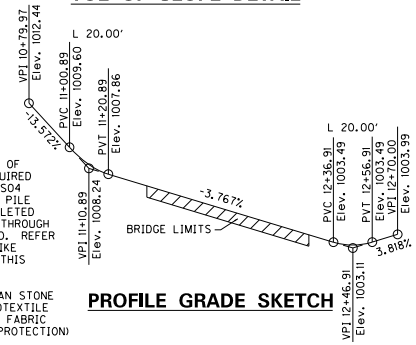
Ⓕ DENOTES FIXED
Ⓔ DENOTES EXPANSION

ELEVATION ALONG CENTERLINE OF SURVEY

IF ROCK IS ENCOUNTERED ABOVE AN ELEVATION 10'-0" BELOW THE BOTTOM OF THE CAP, PRE-DRILLING WILL BE REQUIRED FOR PILE INSTALLATION. SEE SHEET S04 FOR DETAILS. AS AN ALTERNATE TO PILE DRIVING, PRE-DRILLING MAY BE COMPLETED AND THE PILE PLACED THEN SEATED THROUGH THE APPLICATION OF HYDRAULIC LOAD. REFER TO THE SPECIAL NOTE FOR PILE STRIKE ALTERNATE FOR DETAILS REGARDING THIS ALTERNATE.

A 2'-0" (MIN.) THICK CYCLOPEAN STONE RIP RAP OVER CLASS 1 GEOTEXTILE FABRIC (TYP). (GEOTEXTILE FABRIC IS INCIDENTAL TO SLOPE PROTECTION)

* ESTIMATED ELEVATION FOR PILE DRIVING ALTERNATE ONLY.



PROFILE GRADE SKETCH

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Palmer ENGINEERING	DATE: FEBRUARY, 2023	CHECKED BY	*BRIDGE LAYOUT*	ITEM NO. 12-0289 / DEPT. OBJECT CODE D23A / FEMA BRIDGE 4663-DR
				DESIGNED BY: L.A. BEATTIE	L.M. SALLEE	ROUTE CR 1387	BRIDGE ID 060C014 / COUNTY OF KNOTT
				DETAILED BY: J.A. ROSE	L.A. BEATTIE	CROSSING BALLS FORK	SHEET NO. S03 / DRAWING NUMBER 28616

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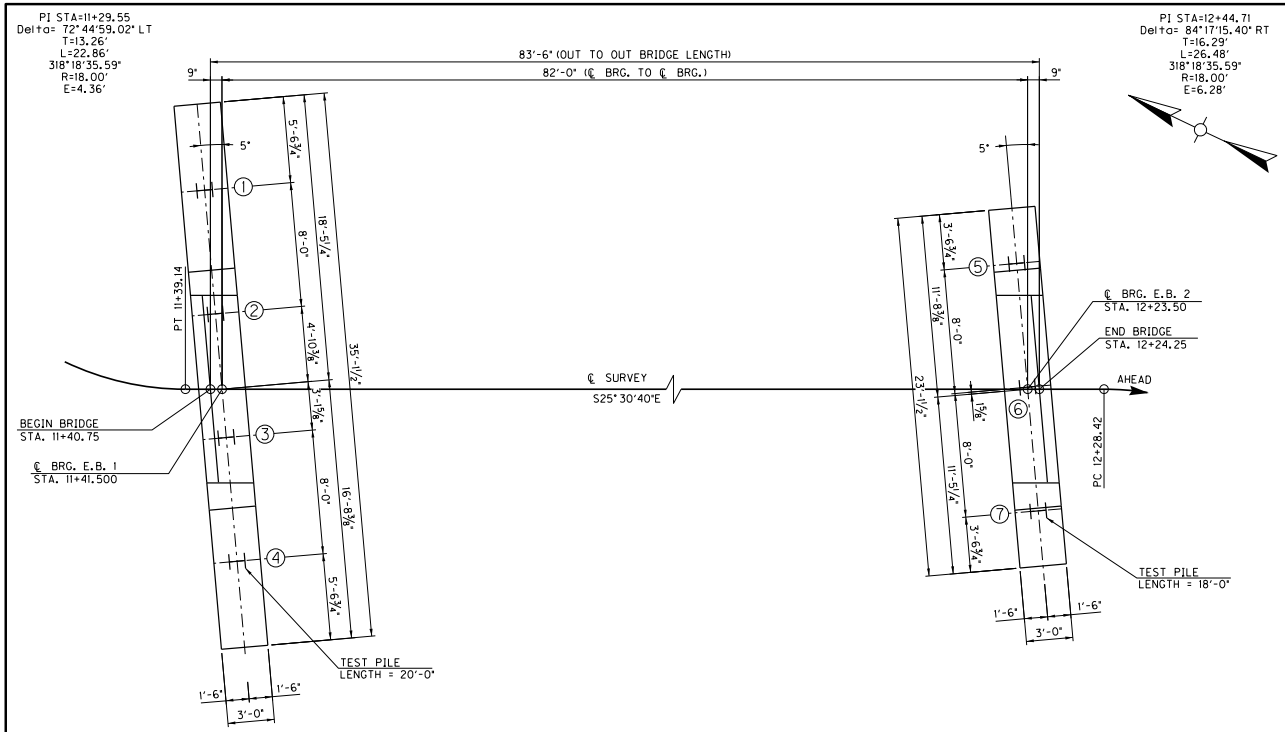

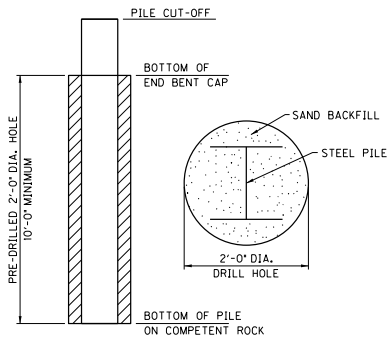

PILE PRE-DRILL DETAIL

(FOR PILE DRIVING ALTERNATE ONLY)

FIELD DATA

For each pile, the Project Engineer shall record the following on this sheet: Pile Length In Place and Point of Pile Elevation as Driven. Submit this record to:

Kentucky Transportation Cabinet
Director, Division of Structural Design
3rd Floor East
200 Mero Street
Frankfort, KY 40622

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

Use HP 12x53, Grade 50, in accordance with BPS-003, C.E.

DEFINITION OF TERMS

Pile Length In Place: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

Pile Cut-Off Elevation: Elevation of the top of pile in the finished structure.

Point of Pile Elevation as Driven: Actual point of pile elevation in the finished structure.

Design Axial Load: Load carried by each pile as estimated from structural design calculations for factored loads.

PILE DRIVING NOTES

End Bent 1: Use Pre-Drilled end bearing steel H-Piles driven to bedrock.

End Bent 2: Use Pre-Drilled end bearing steel H-Piles driven to bedrock.

IF FIELD CONDITIONS SHOW PRE-DRILLING IS NOT REQUIRED, USE END BEARING STEEL H-PILES WITH REINFORCED PILE POINTS DRIVEN TO BEDROCK.

Practical Refusal: Drive point bearing piles to practical refusal. For this project minimum blow requirements are reached after total penetration becomes ¼ inch or less for 5 consecutive blows. Practical refusal is obtained after the pile is struck an additional 5 blows with total penetration of ¼ inch or less. Advance the production piling to the driving resistances specified above and to depths determined by test pile(s) and subsurface data sheet(s). Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

Minimum Pile Length:
10 Feet below bottom of cap as per Standard Drawing BSE-001.

PRE-DRILLING:
WHERE PRE-DRILLING IS NECESSARY FOR PILE INSTALLATION, HOLES SHALL BE DRILLED INTO SOLID ROCK. BACKFILL THE HOLES WITH SAND OR PEA GRAVEL AFTER THE PILE IS PLACED IN THE HOLE. A TEMPORARY CASING MAY BE REQUIRED TO PREVENT COLLAPSE OF THE HOLE. IF USED, REMOVE THE CASING AS THE HOLE IS BEING BACKFILLED. DRIVE PILES TO REFUSAL AFTER BACKFILL OPERATIONS ARE COMPLETE. INCLUDE THE COST OF ALL MATERIALS, LABOR, AND EQUIPMENT NEEDED TO PRE-DRILL, BACKFILL THE HOLES, AND DRIVE THE PILES TO REFUSAL IN THE PRICE PER LINEAR FOOT FOR "PRE-DRILLING FOR PILES."

NOTE: IF PILES ARE SEATED ACCORDING TO THE SPECIAL NOTE FOR PILE STRIKE ALTERNATE, THE SPECIAL NOTE SHALL SUPERSEDE THE "PRE-DRILLING" AND "PILE DRIVING NOTES" ON THIS SHEET. "FIELD DATA" AND "DEFINITION OF TERMS" STILL APPLY. COMPLETE PILE RECORD TABLES AS INDICATED.

PILE RECORD FOR POINT BEARING PILES

INTEGRAL END BENT #1

Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point Of Pile Elev. As Driven	Design Axial Load
	FEET	FEET	FEET	TONS
1	1002.198			70
2	1002.198			70
3	1002.198			70
4	1002.198			70

PILE RECORD FOR POINT BEARING PILES

INTEGRAL END BENT #2

Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point Of Pile Elev. As Driven	Design Axial Load
	FEET	FEET	FEET	TONS
5	999.383			59
6	999.383			59
7	999.383			59

NOTE:

Stations are taken along ℄ Survey.

LEGEND:

I - Denotes HP 12x53 vertical pile
- Piles oriented web axis perpendicular to ℄ end bent.

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Palmer ENGINEERING	DATE: FEBRUARY, 2023	CHECKED BY	FOUNDATION LAYOUT	ITEM NO. 12-0289	DEPT. OBJECT CODE D23A	FEMA BRIDGE 4663-DR
				DESIGNED BY: L.A. BEATTIE	L.M. SALLEE		ROUTE	BRIDGE ID 060C014	COUNTY OF KNOTT
				DETAILED BY: J.A. ROSE	L.A. BEATTIE	CROSSING BALLS FORK	CR 1387	SHEET NO. S04	DRAWING NUMBER 28616

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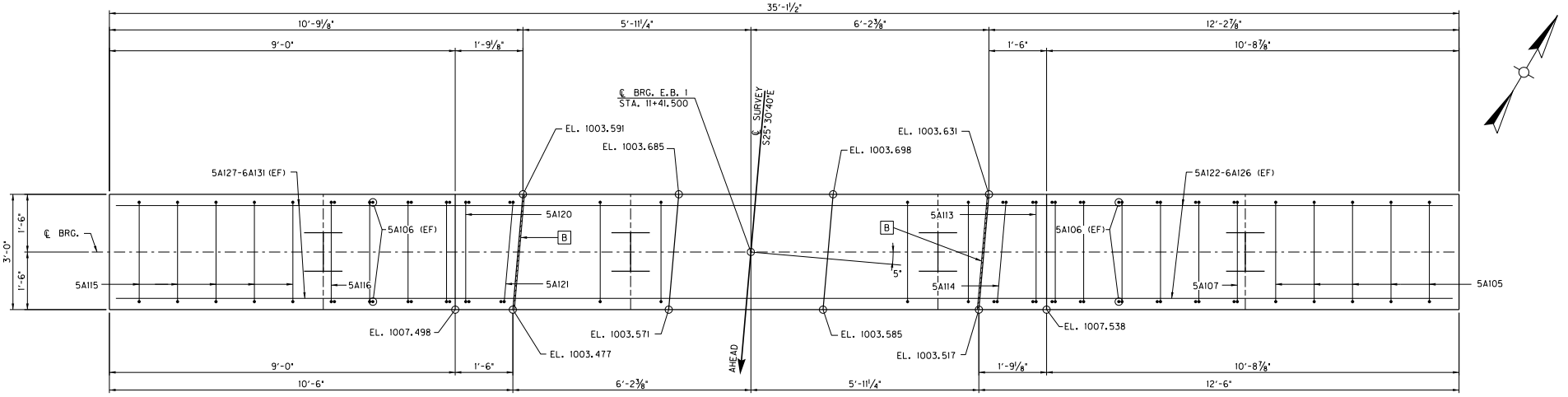
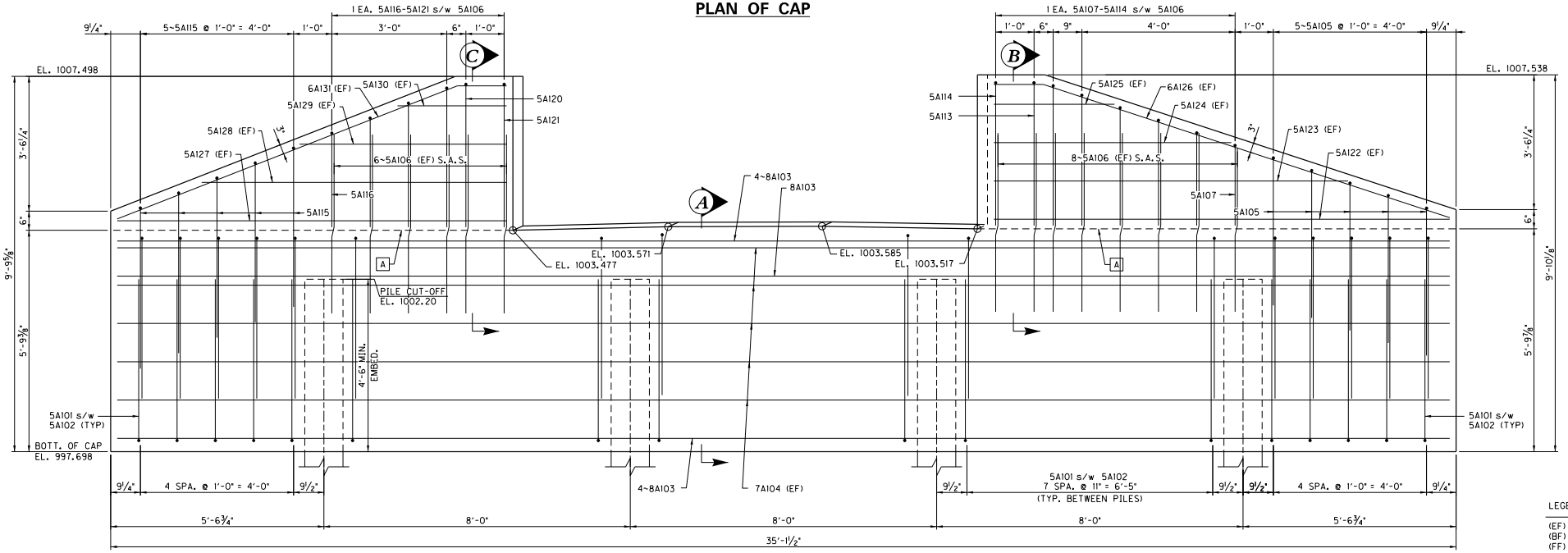


PLAN OF CAP



FOR SECTIONS SEE SHEET S06

ELEVATION
(LOOKING BACK STATION)

A MANDATORY CONST. JT. (TYP)
WINGS SHALL BE POURED AFTER BEAMS ARE SET AND TENSIONING RODS ARE TIGHTENED

B ½" EXPANSION JOINT MATERIAL (TYP) BETWEEN FACE OF BEAM AND WING

LEGEND
(EF) - EACH FACE
(BF) - BACK FACE
(FF) - FRONT FACE
s/w - SPLICE WITH
spa/w - SPACE WITH
S.A.S. - SPA. AS SHOWN

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

END BENT 1

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S05	28616

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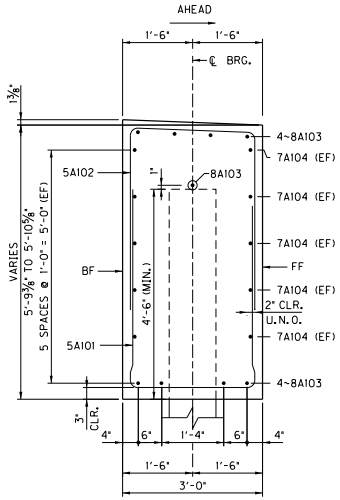
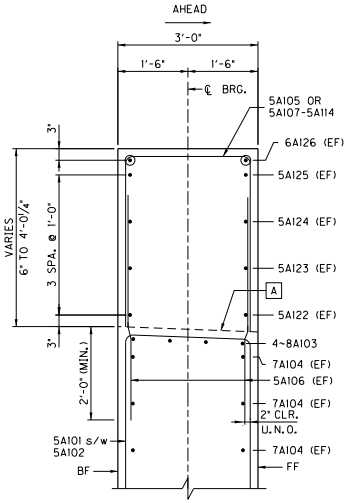


SECTION A



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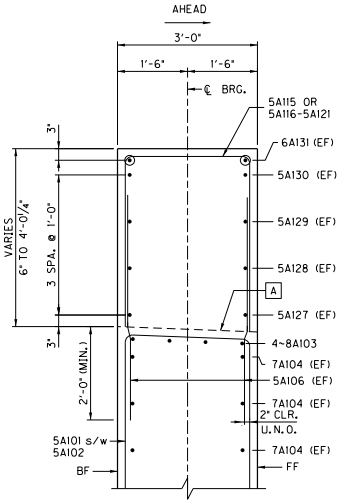

SECTION C

A MANDATORY CONST. JT. (TYP)
WINGS SHALL BE POURED AFTER BEAMS ARE SET AND TENSIONING RODS ARE TIGHTENED

LEGEND

(EF) - EACH FACE
(BF) - BACK FACE
(FF) - FRONT FACE
s/w - SPLICE WITH
spa/w - SPACE WITH
S.A.S. - SPA. AS SHOWN
U.N.O. - UNLESS NOTED OTHERWISE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

END BEND 1 - DETAILS

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S06	28616

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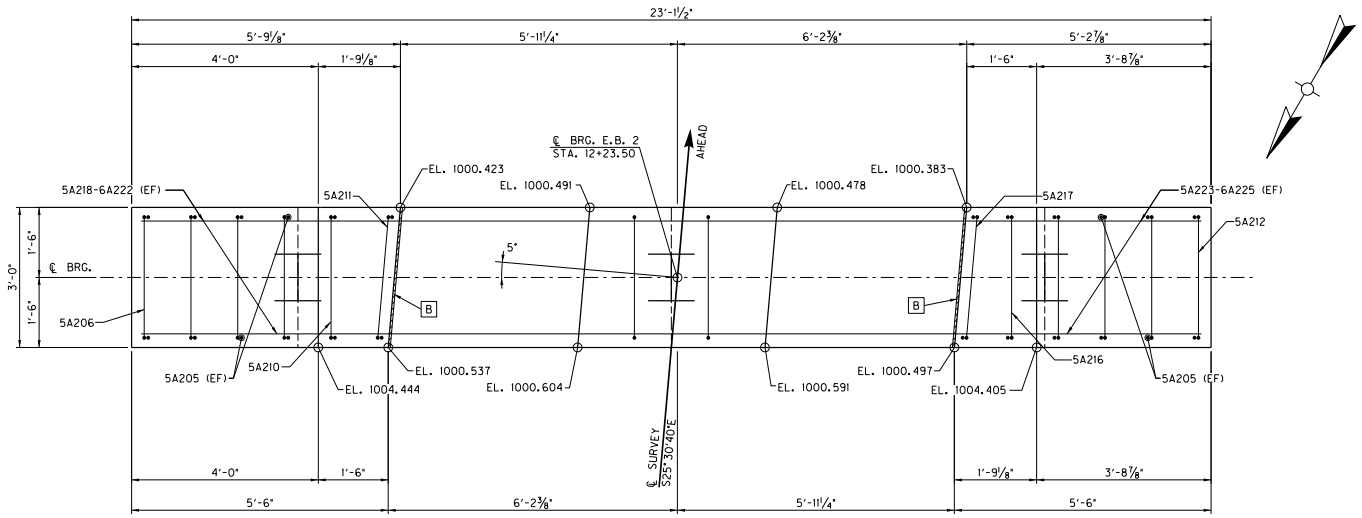

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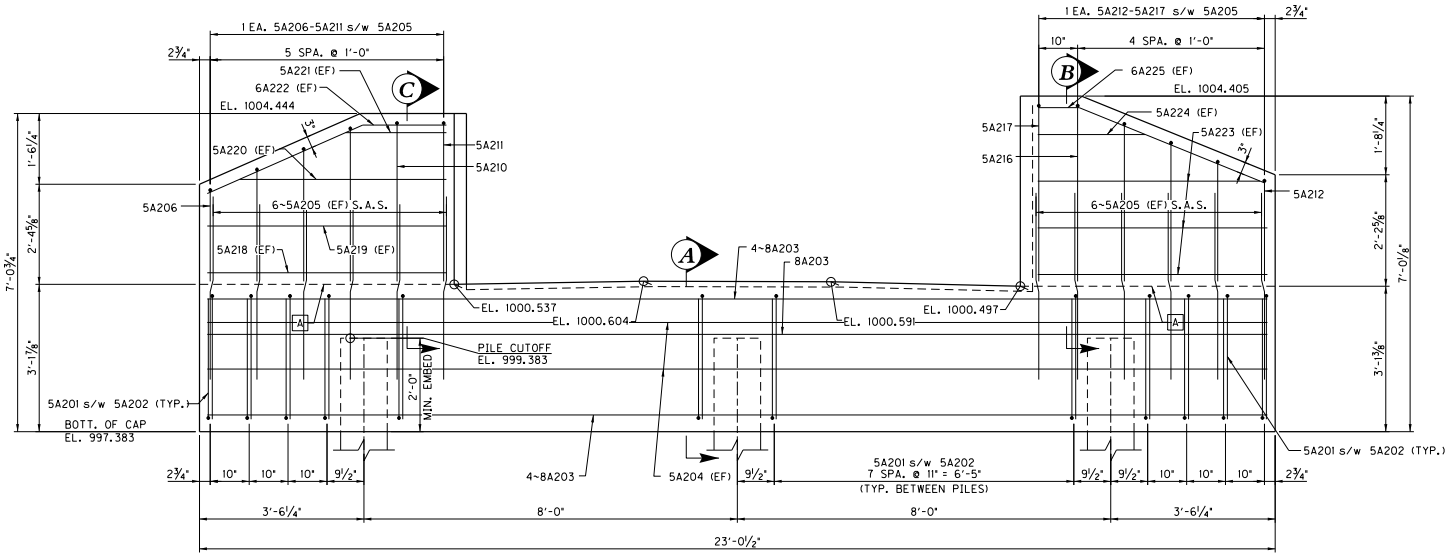

ELEVATION

(LOOKING AHEAD STATION)

NOTE : SEE SHEET S08 FOR SECTION DETAILS

[A] MANDATORY CONST. JT. (TYP)
WINGS SHALL BE POURED AFTER BEAMS ARE SET AND TENSIONING RODS ARE TIGHTENED

[B] ½" EXPANSION JOINT MATERIAL (TYP)
BETWEEN FACE OF BEAM AND WING

LEGEND

(EF) - EACH FACE
(BF) - BACK FACE
(FF) - FRONT FACE
s/w - SPLICE WITH
spa/w - SPACE WITH
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COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY
Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

END BENT 2

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S07	28616

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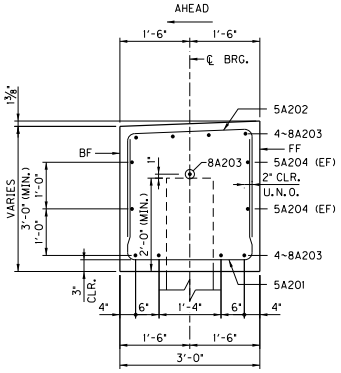
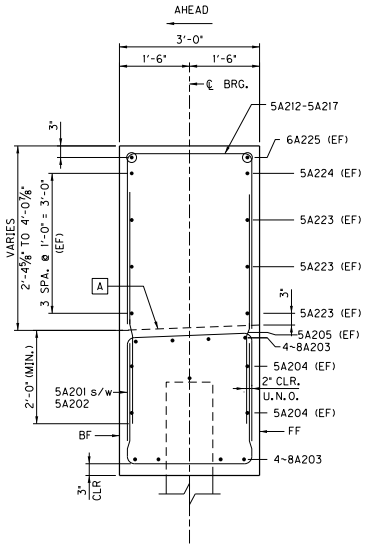


SECTION A



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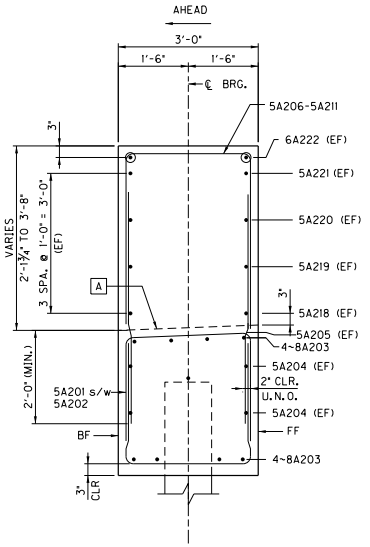

SECTION C

A MANDATORY CONST. JT. (TYP)
WINGS SHALL BE POURED AFTER BEAMS ARE SET AND TENSIONING RODS ARE TIGHTENED

LEGEND

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(FF) - FRONT FACE
s/w - SPLICE WITH
spa/w - SPACE WITH
S.A.S. - SPA. AS SHOWN
U.N.O - UNLESS OHTERWISE NOTED

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

END BENT 2 DETAILS

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
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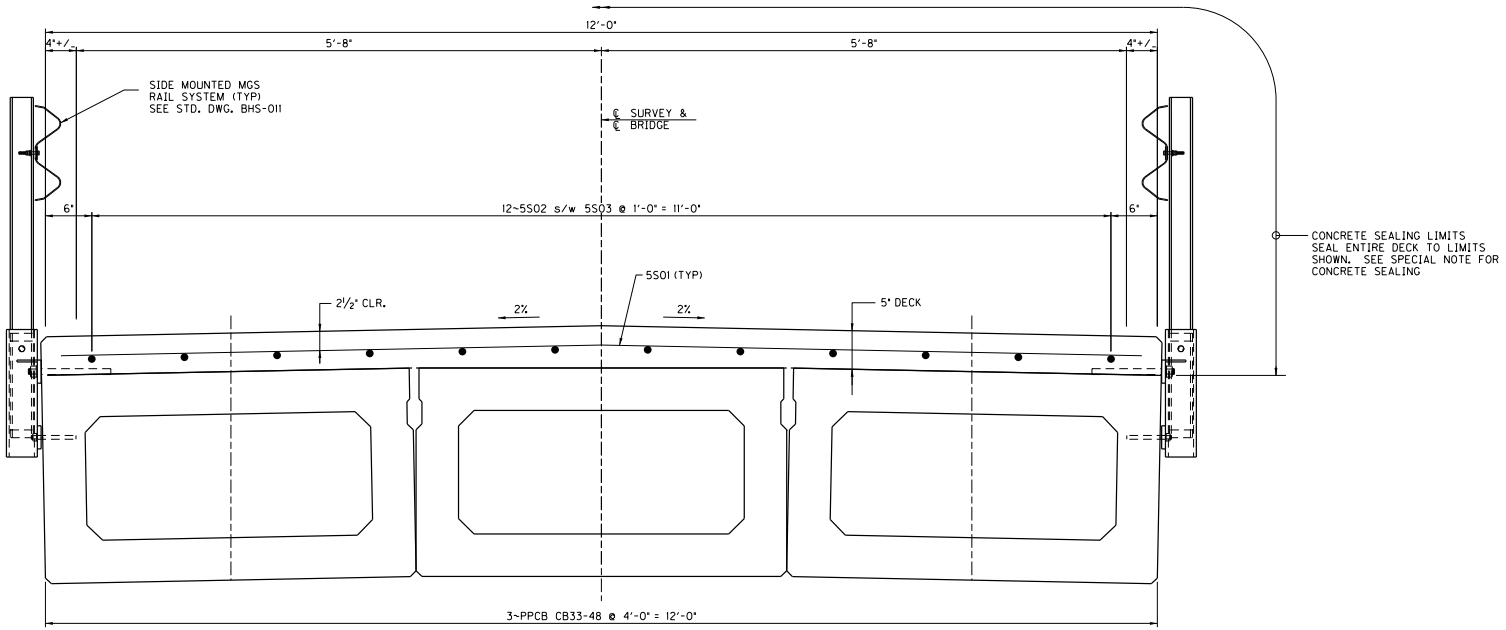
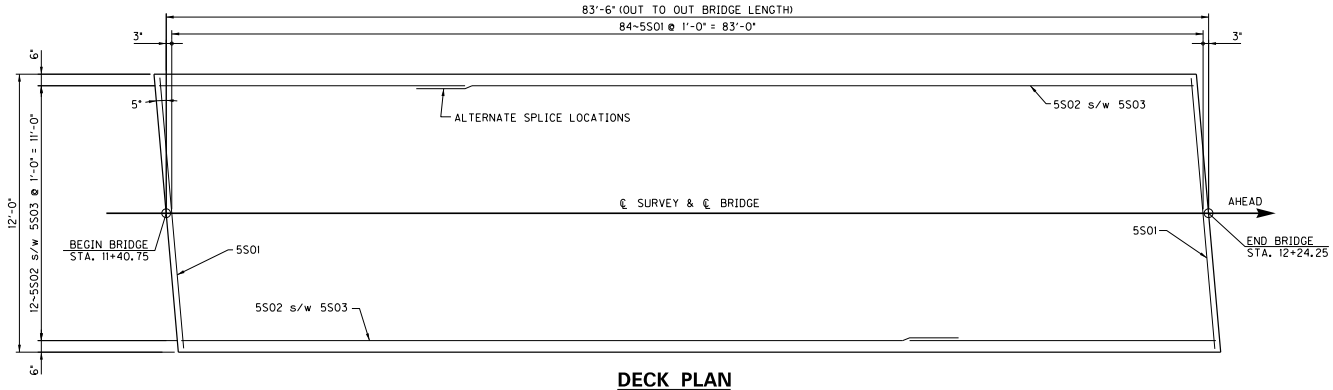


TYPICAL SECTION

(LOOKING AHEAD)



DECK PLAN

MINIMUM LAP SPLICES
#5 BARS - 2'-6"

BILL OF REINFORCEMENT – DECK

MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION
5S01(E)	STR.	84	#5	11'-8"	DECK
5S02(E)	STR.	12	#5	60'-0"	DECK
5S03(E)	STR.	12	#5	25'-8"	DECK

1. THE ENTIRE DECK SHALL BE POURED CONTINUOUSLY FROM END TO END OF THE SLAB BEFORE THE CONCRETE IS ALLOWED TO SET. THE CONCRETE SHALL REMAIN PLASTIC THROUGHOUT THE CONCRETE PLACEMENT.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	M.B. HAGGARD	L.A. BEATTIE	

DECK DETAILS

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S09	28616

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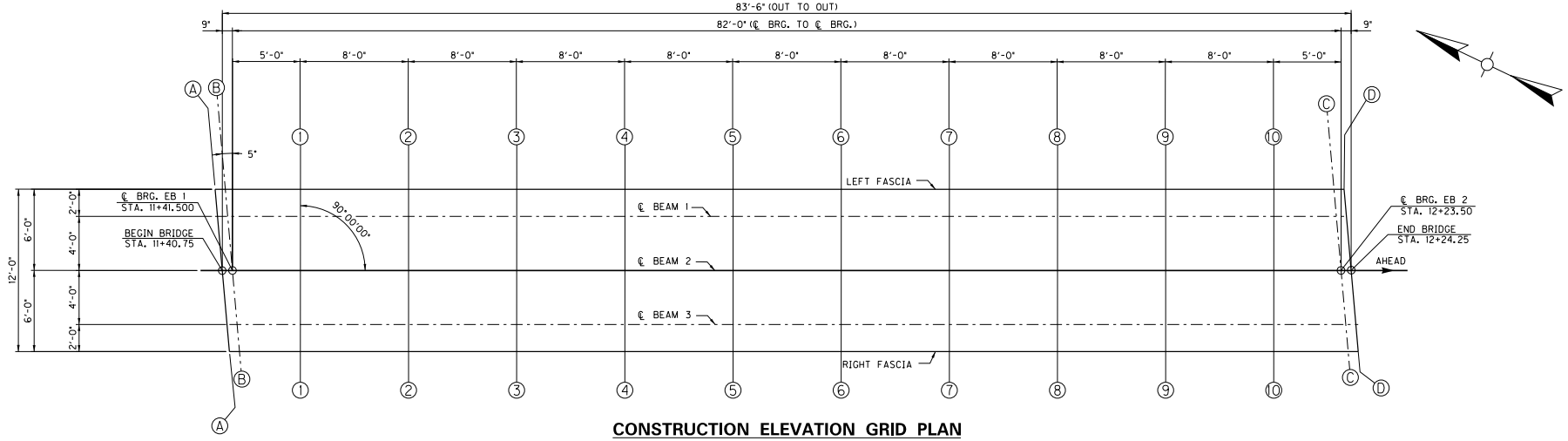
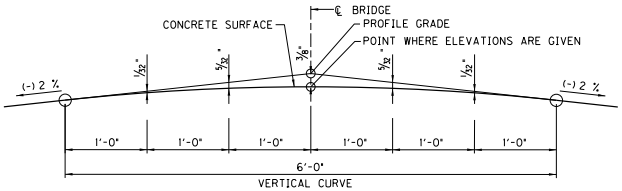
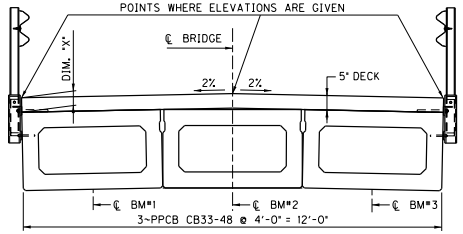


CONSTRUCTION ELEVATION GRID PLAN



PARABOLIC CROWN



TYPICAL SECTION

(LOOKING AHEAD)

TABLE OF ELEVATIONS									
LINE	LEFT FASCIA			PROFILE GRADE			RIGHT FASCIA		
	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"	CONSTR. ELEV.	TOP OF GIRDER	DIM. "X"
A - A	1007.012			1007.081			1006.972		
B - B	1006.983			1007.052			1006.944		
C - C	1003.895			1003.964			1003.855		
D - D	1003.867			1003.936			1003.827		
1 - 1	1006.775			1006.864			1006.775		
2 - 2	1006.474			1006.563			1006.474		
3 - 3	1006.173			1006.261			1006.173		
4 - 4	1005.871			1005.960			1005.871		
5 - 5	1005.570			1005.659			1005.570		
6 - 6	1005.269			1005.357			1005.269		
7 - 7	1004.967			1005.056			1004.967		
8 - 8	1004.666			1004.755			1004.666		
9 - 9	1004.365			1004.454			1004.365		
10 - 10	1004.063			1004.152			1004.063		

NOTES FOR ELEVATIONS TAKEN ON PRESTRESSED CONCRETE BOX BEAMS

TAKE ELEVATIONS ON TOP OF BEAM AT POINTS INDICATED BY THE GRID LAYOUT. THE BEAM ELEVATIONS ARE TO BE READ TO THREE DECIMALS, AND ENTERED IN TABLES UNDER "TOP OF BEAM ELEVATIONS".

COMPUTE DIMENSION "X" AS FOLLOWS:

"CONSTRUCTION ELEVATION" MINUS "TOP OF BEAM" ELEVATION EQUALS DIMENSION "X". CONSTRUCTION ELEVATIONS INCLUDE CAMBER DUE TO WEIGHT OF CONCRETE SLAB AND BARRIER. MEASURING OF DIMENSION "X" GIVES THE FINAL CHECK ON BEAM TOLERANCES FOR CAMBER, BEAM DAMAGE, AND ERRORS IN ERECTION THAT PRODUCE REVERSE CAMBERS, SAGS, AND UNSIGHTLY FASCIA BEAMS.

FOR SETTING TEMPLATES, MEASURE DIMENSION "X" ABOVE TOP OF BEAMS FOR TOP OF TEMPLATE. DO NOT SET TEMPLATE BY ELEVATIONS.

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE BEAMS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF BEAM" ELEVATIONS.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY
Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	M.B. HAGGARD	L.A. BEATTIE	

CONSTRUCTION ELEVATIONS

CROSSING
BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S10	28616

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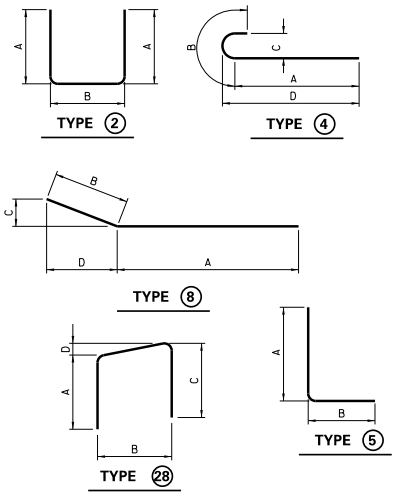
BILL OF REINFORCEMENT – END BENT 1

MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	a	b	c	d	e
5A101(S)(E)	2	34	# 5	11'-2"	CAP BEAM	4'-3"	2'-8"			
5A102(S)(E)	28	34	# 5	10'-5"	CAP BEAM	3'-10"	2'-8"	3'-11"	1"	
8A103(E)	STR.	9	# 8	34'-10"	CAP BEAM					
7A104(E)	STR.	10	# 7	34'-10"	CAP BEAM					
5A105(S)(E)	2	5	# 5	10'-4"	LEFT WING	3'-10"	2'-8"			
5A106(E)	STR.	28	# 5	5'-0"	WING DOWEL					
5A107(S)(E)	2	1	# 5	7'-0"	LEFT WING	2'-2"	2'-8"			
5A108(S)(E)	2	1	# 5	7'-8"	LEFT WING	2'-6"	2'-8"			
5A109(S)(E)	2	1	# 5	8'-2"	LEFT WING	2'-9"	2'-8"			
5A110(S)(E)	2	1	# 5	9'-0"	LEFT WING	3'-2"	2'-8"			
5A111(S)(E)	2	1	# 5	9'-8"	LEFT WING	3'-6"	2'-8"			
5A112(S)(E)	2	1	# 5	10'-0"	LEFT WING	3'-8"	2'-8"			
8A113(S)(E)	2	1	# 5	10'-2"	LEFT WING	3'-9"	2'-8"			
5A114(S)(E)	2	1	# 5	10'-3"	LEFT WING	3'-9"	2'-8½"			
5A115(S)(E)	2	5	# 5	11'-0"	RIGHT WING	4'-2"	2'-8"			
5A116(S)(E)	2	1	# 5	7'-8"	RIGHT WING	2'-6"	2'-8"			
5A117(S)(E)	2	1	# 5	8'-6"	RIGHT WING	2'-11"	2'-8"			
5A118(S)(E)	2	1	# 5	9'-2"	RIGHT WING	3'-3"	2'-8"			
5A119(S)(E)	2	1	# 5	10'-0"	RIGHT WING	3'-8"	2'-8"			
5A120(S)(E)	2	1	# 5	10'-2"	RIGHT WING	3'-9"	2'-8"			
5A121(S)(E)	2	1	# 5	10'-3"	RIGHT WING	3'-9"	2'-8½"			
5A122(E)	STR.	2	# 5	11'-10"	LEFT WING					
5A123(E)	STR.	2	# 5	9'-3"	LEFT WING					
5A124(E)	STR.	2	# 5	6'-2"	LEFT WING					
5A125(E)	STR.	2	# 5	3'-2"	LEFT WING					
6A126(E)	8	2	# 6	12'-5"	LEFT WING	11'-2"	1'-3"	4⅝"	1'-2¼"	
5A127(E)	STR.	2	# 5	10'-2"	RIGHT WING					
5A128(E)	STR.	2	# 5	7'-11"	RIGHT WING					
5A129(E)	STR.	2	# 5	5'-5"	RIGHT WING					
5A130(E)	STR.	2	# 5	2'-10"	RIGHT WING					
6A131(E)	8	2	# 6	10'-9"	RIGHT WING	9'-6"	1'-3"	5½"	1'-2"	

BILL OF REINFORCEMENT – END BENT 2

MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	a	b	c	d	e
5A201(S)(E)	2	24	# 5	7'-10"	CAP BEAM	2'-7"	2'-8"			
5A202(S)(E)	28	24	# 5	8'-1"	CAP BEAM	2'-8"	2'-8"	2'-9"	1"	
8A203(E)	STR.	9	# 8	22'-8"	CAP BEAM					
5A204(E)	STR.	4	# 5	22'-8"	CAP BEAM					
5A205(E)	STR.	24	# 5	5'-0"	WING DOWELS					
5A206(S)(E)	2	1	# 5	7'-2"	LEFT WING	2'-3"	2'-8"			
5A207(S)(E)	2	1	# 5	8'-0"	LEFT WING	2'-8"	2'-8"			
5A208(S)(E)	2	1	# 5	8'-10"	LEFT WING	3'-1	2'-8"			
5A209(S)(E)	2	1	# 5	9'-6"	LEFT WING	3'-5"	2'-8"			
5A210(S)(E)	2	1	# 5	10'-2"	LEFT WING	3'-9"	2'-8"			
5A211(S)(E)	2	1	# 5	10'-3"	LEFT WING	3'-9"	2'-8½"			
5A212(S)(E)	2	1	# 5	7'-0"	RIGHT WING	2'-2"	2'-8"			
5A213(S)(E)	2	1	# 5	7'-10"	RIGHT WING	2'-7"	2'-8"			
5A214(S)(E)	2	1	# 5	8'-8"	RIGHT WING	3'-0"	2'-8"			
5A215(S)(E)	2	1	# 5	9'-6"	RIGHT WING	3'-5"	2'-8"			
5A216(S)(E)	2	1	# 5	10'-2"	RIGHT WING	3'-9"	2'-8"			
5A217(S)(E)	2	1	# 5	10'-3"	RIGHT WING	3'-9"	2'-8½"			
5A218(E)	STR.	2	# 5	5'-2"	LEFT WING					
5A219(E)	STR.	2	# 5	5'-2"	LEFT WING					
5A220(E)	STR.	2	# 5	4'-5"	LEFT WING					
5A221(E)	STR.	2	# 5	2'-1"	LEFT WING					
6A222(E)	8	2	# 6	5'-2"	LEFT WING	3'-11"	1'-3"	6"	1'-1¾"	
5A223(E)	STR.	6	# 5	4'-11"	RIGHT WING					
5A224(E)	STR.	2	# 5	2'-6"	RIGHT WING					
6A225(E)	8	2	# 6	5'-0"	RIGHT WING	3'-9"	1'-3"	5⅝"	1'-1⅞"	



NOTE : REINFORCING BARS DESIGNATED WITH SUFFIX (E) IN PLANS SHALL BE EPOXY COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

REINFORCING BARS DESIGNATED WITH THE SUFFIX (S) IN PLANS ARE STIRRUP BARS.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

BILL OF REINFORCEMENT

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S11	28616

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Drilling Firm: Kentucky Transportation Cabinet
For: Division of Structural Design
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 9/6/22

Project ID: 060C014	Knott - DOBSON DR (CR 1387)	Project Type: Structure Bridge
Item Number:		Project Manager:

Hole Number 1	Immediate Water Depth NA	Start Date 09/01/2022	Hole Type sounding
Surface Elevation 1002.3	Static Water Depth NA	End Date 09/01/2022	Rig_Number
Total Depth 15.7'	Driller Cody Davidson	Latitude(83) 37.399715	
Location + 'Lt.		Longitude(83) -83.052309	

Lithology Elevation	Lithology Depth	Description (Overburden / Rock Core)	Sample No. Std/Ky RQD	Depth (ft) Run (ft)	Rec. (ft) Rec (ft)	SPT Blows Rec (%)	Sample Type SDI (JS)	Remarks
	0.6	Limestone gravel.						
		Medium stiff, brown, moist, sandy clay with rock fragments.						
	14.1	(Refusal)						
	15.7	Medium hard, gray, shale.						
		Hard, gray, shale.						
		(Bottom of Hole 15.7') (Refusal @ 14.1)						

Drilling Firm: Kentucky Transportation Cabinet
For: Division of Structural Design
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 9/6/22

Project ID: 060C014	Knott - DOBSON DR (CR 1387)	Project Type: Structure Bridge
Item Number:		Project Manager:

Hole Number 2	Immediate Water Depth NA	Start Date 09/01/2022	Hole Type sounding
Surface Elevation 1004.8	Static Water Depth NA	End Date 09/01/2022	Rig_Number
Total Depth 16.6'	Driller Cody Davidson	Latitude(83) 37.399715	
Location + 'Lt.		Longitude(83) -83.052309	

Lithology Elevation	Lithology Depth	Description (Overburden / Rock Core)	Sample No. Std/Ky RQD	Depth (ft) Run (ft)	Rec. (ft) Rec (ft)	SPT Blows Rec (%)	Sample Type SDI (JS)	Remarks
	0.6	Limestone gravel.						
		Medium stiff, brown, moist, sandy clay with rock fragments and sandstone boulders.						
	15.6	(Refusal)						
	16.6	Medium hard, gray, shale.						
		Hard, gray, shale.						
		(Bottom of Hole 16.6') (Refusal @ 15.6)						

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

REVISION	DATE

PREPARED BY Palmer ENGINEERING

DATE:	FEBRUARY, 2023	CHECKED BY	
DESIGNED BY:	L.A. BEATTIE	L.M. SALLEE	
DETAILED BY:	J.A. ROSE	L.A. BEATTIE	

BORING LOGS

CROSSING: BALLS FORK

ITEM NO.	DEPT. OBJECT CODE	FEMA BRIDGE
12-0289	D23A	4663-DR
ROUTE	BRIDGE ID	COUNTY OF
CR 1387	060C014	KNOTT
	SHEET NO.	DRAWING NUMBER
	S12	28616

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